


Natural Gas Sensing and Mitigation Workshop: Introduction to ARPA-E

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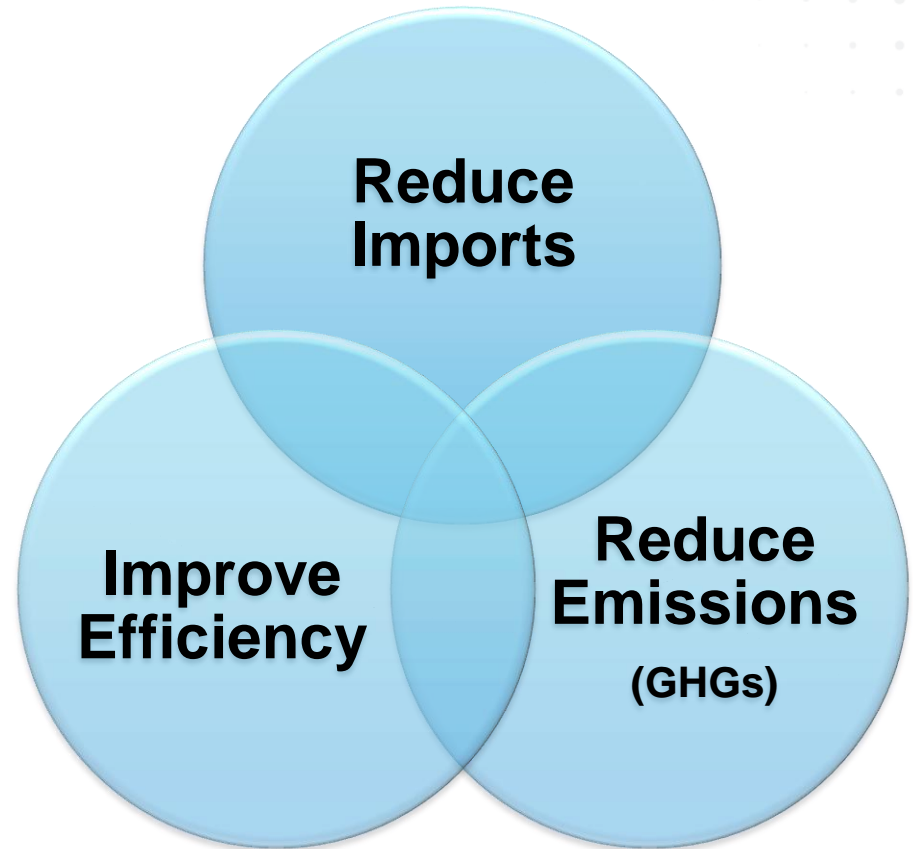


The ARPA-E Mission

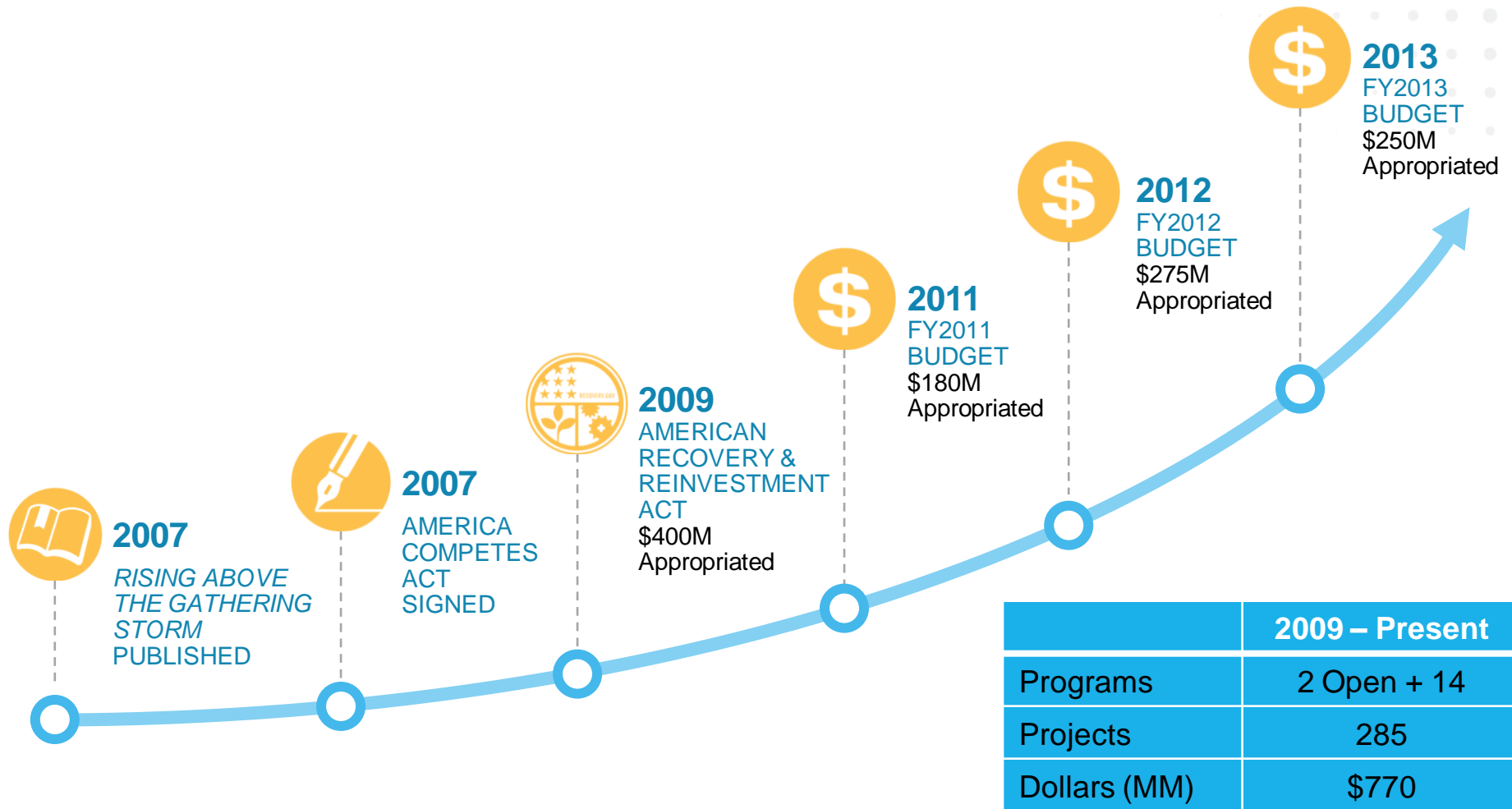
Catalyze and support the development of transformational, high-impact energy technologies

Ensure America's

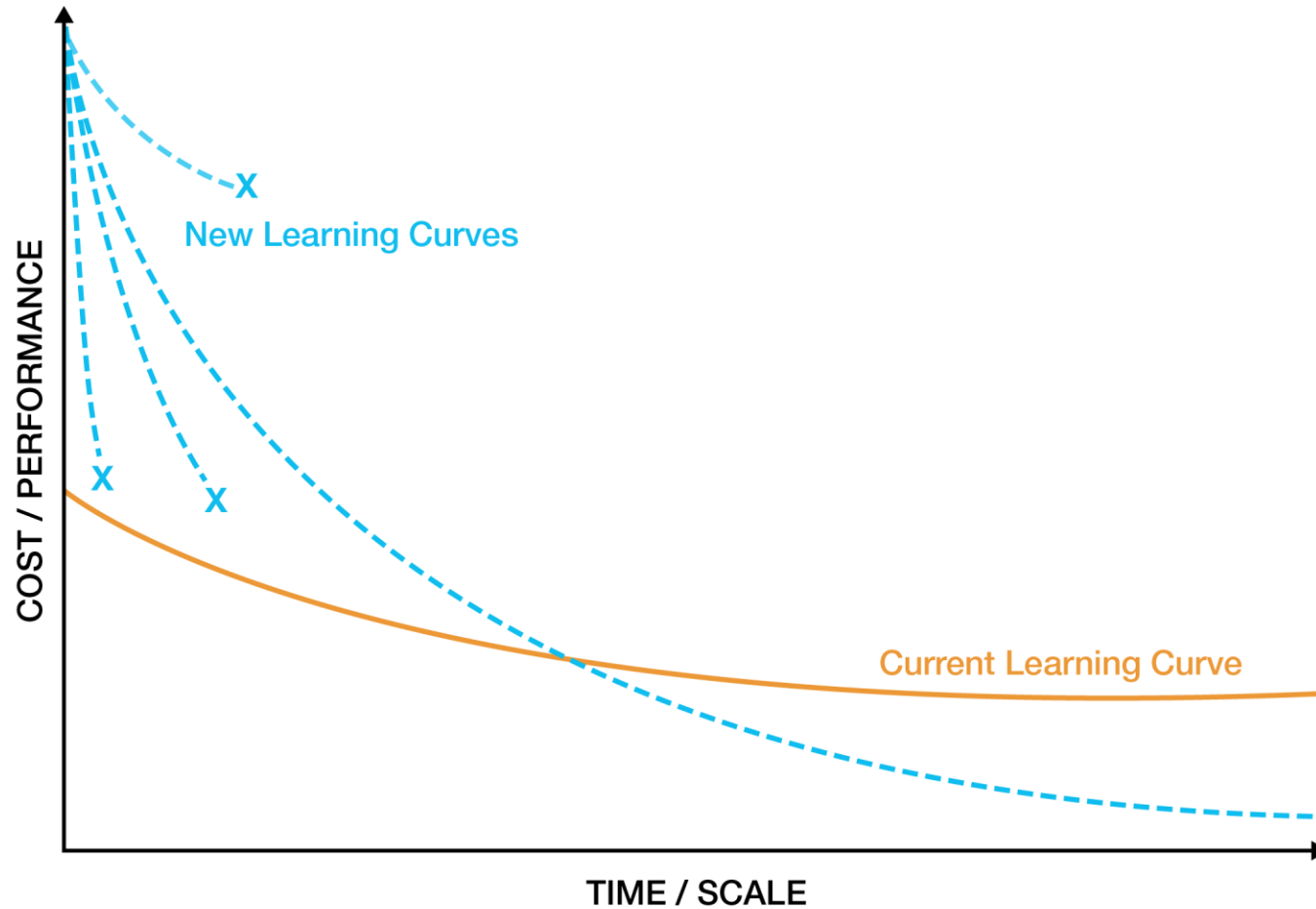
- National Security
- Economic Security
- Energy Security
- Technological Lead



A Brief History of ARPA-E



Creating New Learning Curves



What Makes an ARPA-E Project?



IMPACT

- High impact on ARPA-E mission areas
- Credible path to market
- Large commercial application



TRANSFORM

- Challenges what is possible
- Disrupts existing learning curves
- Leaps beyond today's technologies



BRIDGE

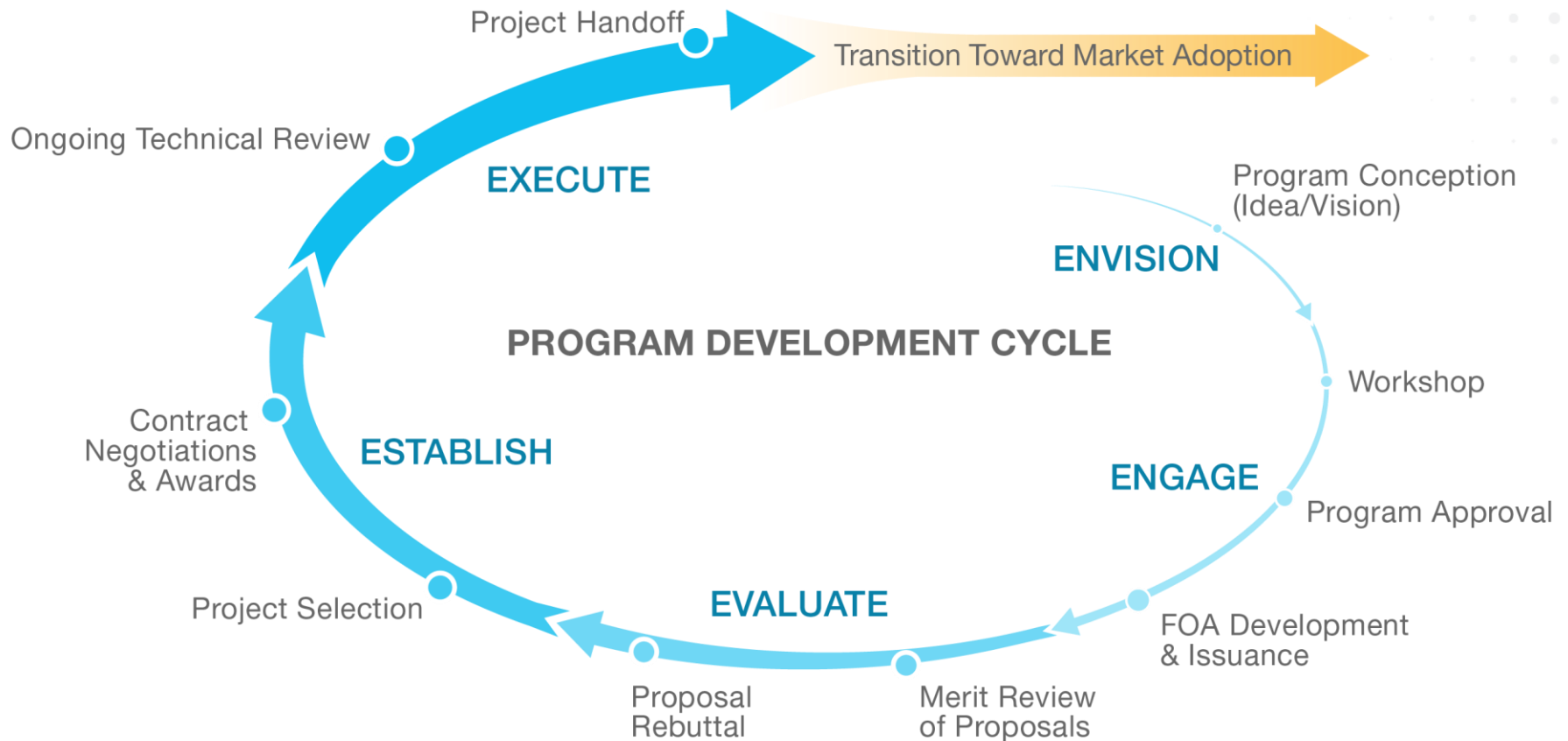
- Translates science into breakthrough technology
- Not researched or funded elsewhere
- Catalyzes new interest and investment



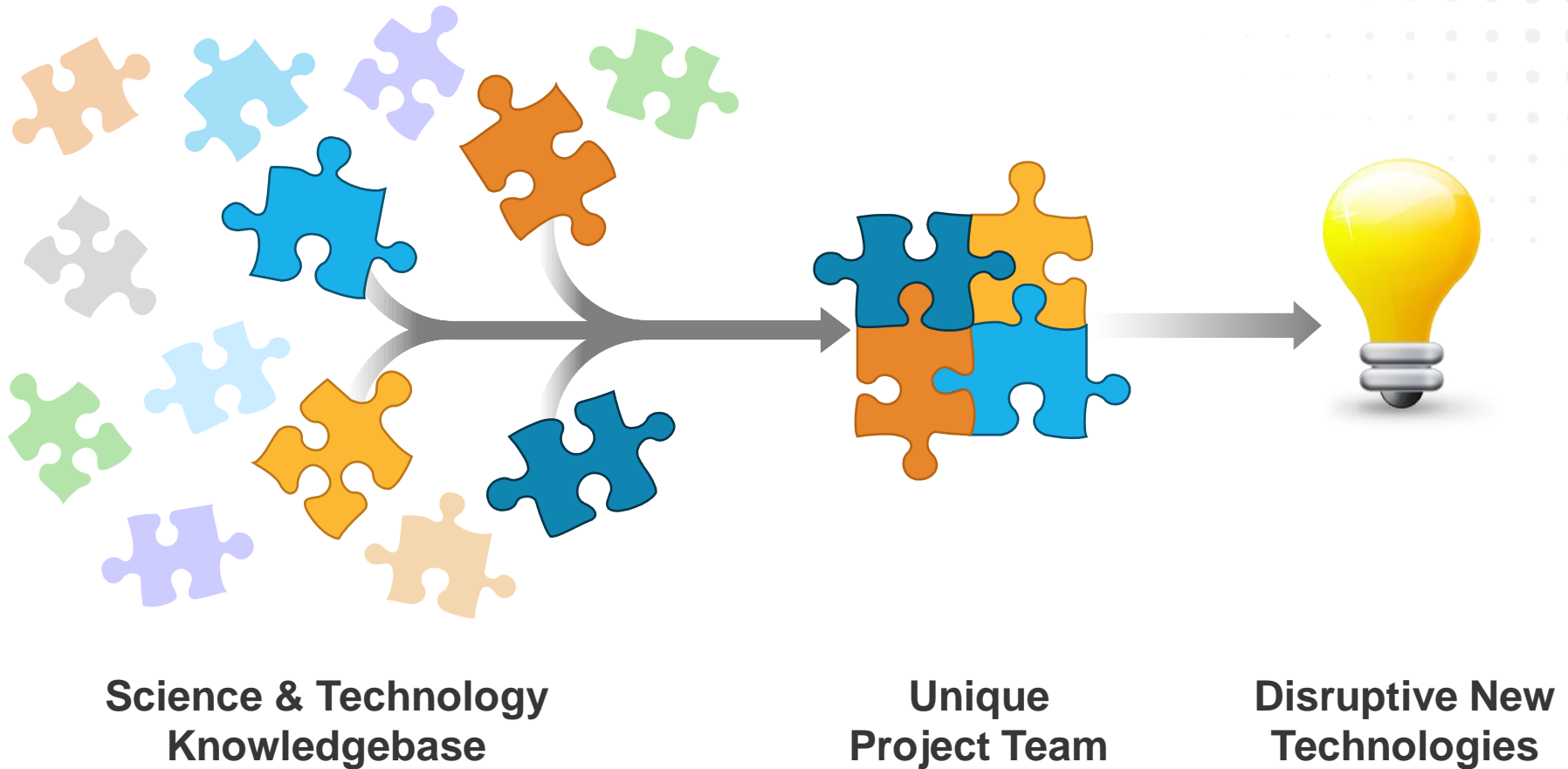
TEAM

- Comprised of best-in-class people
- Cross-disciplinary skill sets
- Translation oriented

Technology Acceleration Model



How does ARPA-E Enable Transformations?



ARPA-E teams come from a multiple segments of the S&T base to attack problems in entirely new ways

Focused Programs



TRANSPORTATION ENERGY TECHNOLOGIES

BEEST

Electrofuels



PETRO

MOVE

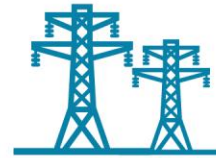
HEATS

REACT



AMPED

SBIR/STTR



STATIONARY ENERGY TECHNOLOGIES

BEET-IT

IMPACCT

GRIDS

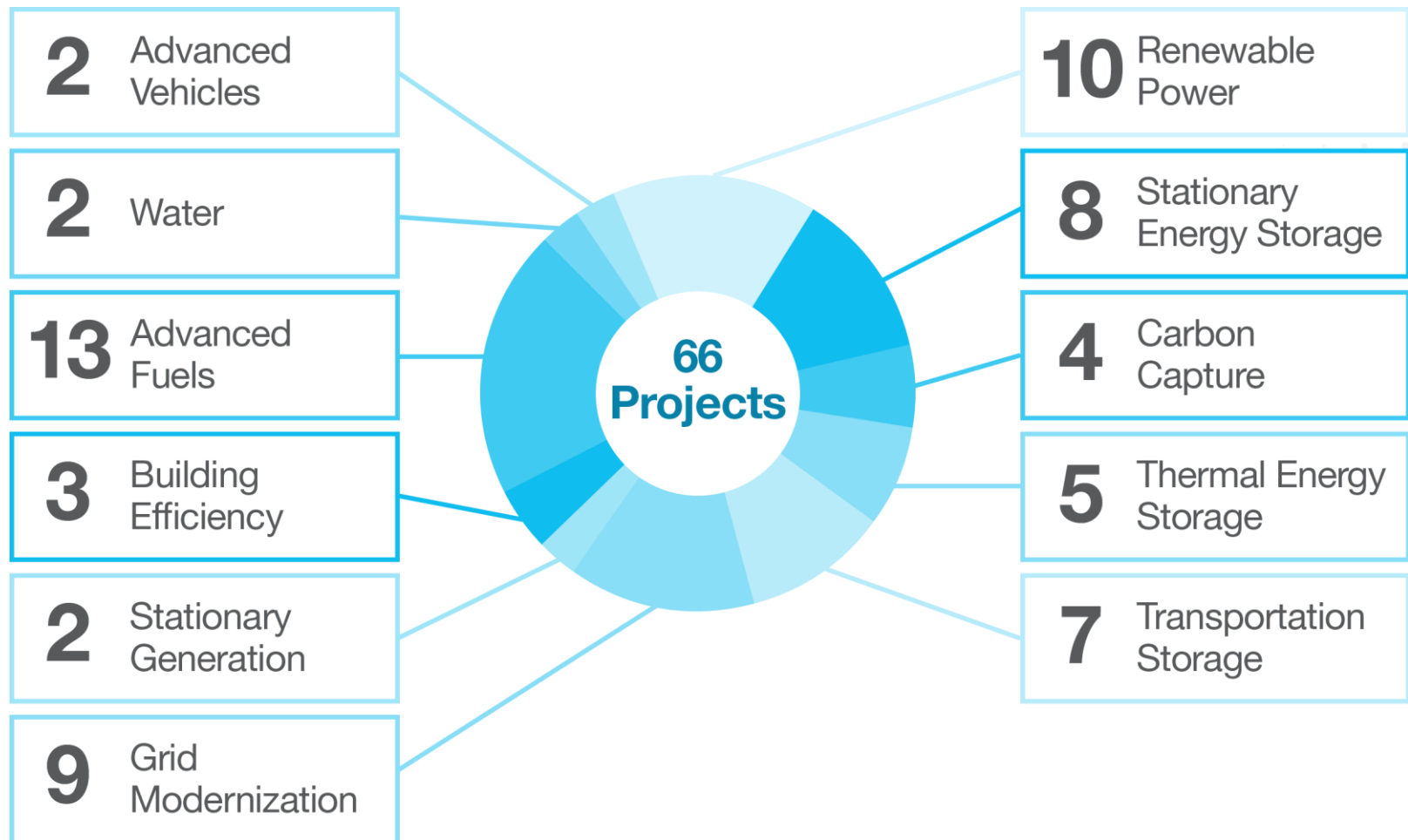


Solar ADEPT

GENI

ADEPT

OPEN 2012: 66 Projects, 24 States, 11 Areas



Measuring ARPA-E's Success



MOVING TECHNOLOGY TOWARD MARKET

- Partnerships with Other Government Agencies
- New Company Formation
- Established Company Partnerships
- New Communities



BREAKTHROUGH ACHIEVEMENTS

- Technology breakthroughs
- Patents
- Publications



OPERATIONAL EXCELLENCE

- Expedited program development and project selection
- Aggressive performance metrics

New Funding Opportunities



RANGE

Robust Affordable Next Generation
EV-storage

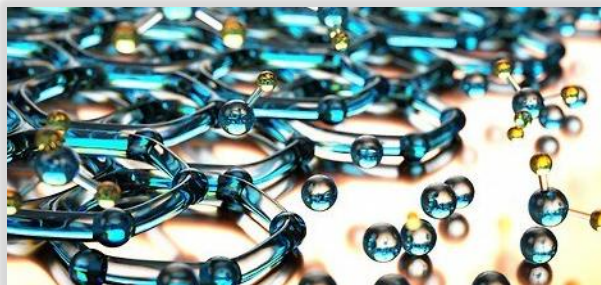
Release Date: 2/19/2013



METALS

Modern Electro/Thermochemical
Advances in Light-metal Systems

Release Date: 3/20/2013



REMOTE

Reducing Emissions Using Methanotrophic
Organisms for Transportation Energy

Release Date: 3/15/2013

Program Directors

ARPA-E is always recruiting new Program Directors, who serve 3-year terms

ROLES & RESPONSIBILITIES

Program development

- ▶ Perform technical deep dive soliciting input from multiple stakeholders in the R&D community
- ▶ Present & defend program concept in climate of constructive criticism

Active project management

- ▶ Actively manage portfolio projects from merit reviews through project completion
- ▶ Extensive “hands-on” work with awardees

Thought leadership

- ▶ Represent ARPA-E as a thought leader in the program area

ATTRIBUTES

- ▶ R&D experience; intellectual integrity & flexibility; technical breadth; commitment to energy; communication skills; leadership; and team management
- ▶ *Confidence, but not arrogance*

If you are interested please contact me or a current ARPA-E Program Director



U.S. DEPARTMENT OF
ENERGY

www.arpa-e.energy.gov